

Second Supplemental Response  
Application No. 10/662,950  
Date: October 8, 2006

Attorney Docket YO896-0213R5

### **REMARKS**

#### **Introduction**

Applicant submits the following discussion to place of record applicant's views concerning the Official Action of 02/01/2000 in abandoned application No. 09/227,649 filed 01/08/1999, which is relied upon for priority in the present application.

In order to discuss the Official Action of 02/01/2000 in the prior abandoned Application No. 09/227,649, it will be necessary to refer to documents filed as Enclosures 6, 7, 8 and 9 in the Information Disclosure Statement (sent by Express Mail on October 7, 2006). These documents are identified below and are assigned respective brief identifying titles (shown bold and underlined, with quotation marks) to facilitate reference thereto.

#### **Terminology to be Used Hereinafter to Identify the Documents Being Discussed**

The following documents which were submitted with the IDS filed October 7, 2006, are to be referred to in the following discussion of the Official Action 02/01/2000:

Enclosure (6) of the IDS of October 7, 2006

D. Friedman, H. Heinrich, D. Duan, "A low-power CMOS integrated circuit for field-powered radio frequency identification (RFID) tags," 1997 Digest of Technical Papers of the IEEE International Solid-State Circuits Conference (ISSCC), San Francisco, CA, February 1997," a copy being enclosed herewith. This publication will hereafter be referred to as the:

**:"1997 Literature Reference"**

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Enclosure (7) of the IDS of October 7, 2006

Copy of Official Action dated 02/01/2006 in Abandoned Application  
No. 09/227,649 filed 01/08/1999, Attorney Docket Y0896-02/3R1  
will hereafter be referred to as the:

**"Official Action of 02/01/2000".**

Enclosure (8) of the IDS of October 7, 2006

Copy of Abandoned Application No. 09/227,649 Filed 01/08/1999 in  
the names of Harley Kent Heinrich and Daniel J. Friedman  
will hereafter be referred to as the:

**"Abandoned Application No. 09/227,649".**

Enclosure (9) of the IDS of October 7, 2006

Copy of Provisional Patent Application No. 60/070,758 Filed  
01/08/1998 in the names of Daniel J. Friedman and Harley Kent  
Heinrich, Attorney Docket YO896-0213P1 which is incorporated by  
reference in the various sections of the Abandoned Application No.  
09/227,649 will hereafter be referred to as the:

**"Incorporated Provisional Patent Application".**

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**The Rejection of Claims 1-3 As Indefinite  
in the Office Action of 02/01/2000**

For the sake of advising the Examiner concerning the rejection of claims 1-3 of Application No. 09/227,649, Applicant is submitting below the rejected claims 1-3, with revisions that would be proposed in view of the rejection of original claims 1-3 under 35 USC 112, second paragraph, in section 8 at page 4 of the enclosed Office Action of 02/01/2000. (Beginning on the following page hereof, applicant presents a response to the rejection of claims 1-3 under 35 USC 112, first paragraph, which is found in section 7 beginning at page 3 of the enclosed Official Action of 02/01/2000.)

Claim 1 (currently amended) A ~~[[The]]~~ method of effecting a multitag identification operation, which comprises:

- (a) sending energizing RF energy to RF tags in a field region periodically during a multitag identification operation,
- (b) for certain tags receiving sufficient RF energy, utilizing stored energy stored during receipt of the RF energy to maintain given state information during a given time interval of at least about one second in case adequate RF energy is not again received by the certain tags within ~~[[in]]~~ such given time interval, and
- (c) before the end of such given time interval, again sending RF energy to the certain tags in the field region, such that the certain tags retain the given state information during the multitag identification operation.

Claim 2 (currently amended) The method of claim 1 where the certain tags will automatically effectively lose the given state information at the end of the multitag identification operation when RF energy is not received before the end of said given time interval.

Claim 3 (cancelled)

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**Applicant's Response to Section 7 of the Enclosed Official Action**  
**Dated 02/01/2000 in Application No. 09/227,649 Filed 01/08/1999**

At page 3 of the Official Action of 02/01/2000, the Examiner makes the following parenthetical remark:

“(The following comments are directed to the specification and drawings of provisional application 60/070,758, said drawings corresponding to Figs. 1-6 of this application. It appears that applicant is relying solely on this provisional application for the “essential material” to be incorporated by reference into the present application (see MPEP 608.01(p), part I), since of the other prior art which is incorporated by reference in the specification, the only references that are particularly discussed in the specification are referred to as merely providing ‘exemplary’ teachings.)”.

[Official Action of 02/01/2000, page 3, the middle section of text]

Applicant would respectfully comment that the issues raised in section 7 of the Official Action of 02/01/2000 appear to relate to the state of the art, so that the incorporated material is believed to be highly relevant. The word “exemplary” should not be construed as implying a lack of relevance since all of the specific information in a patent application is exemplary.

At paragraph I beginning at the lower part of page 3, the Official Action states: “The specific nature of the components making up the RF tag is not clearly set forth.” In response, reference is made to the 1997 Literature Reference incorporated by reference at page 7 of the Abandoned Application No. 09/227,649 as filed 01/08/1999.

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The 1997 Literature Reference was published February 8, 1997, and the authors include Mssrs. Friedman and Heinrich, the named inventors herein who were then with the IBM Thomas J. Watson Research Center. In Figure 3 at page 295 of this publication, an example of a power and signal recovery circuit is given. The description of Figure 3 at page 294, the first column, the fifth paragraph, explains that the capacitor Cpower (which is indicated in FIG. 2 of the Abandoned Application No. 09/227,649) stabilizes the supply to the chip. As stated in the 1997 Literature Reference, the first column, at the last sentence of the fourth paragraph: all current used during the time the broadcast field is off, comes from the 500pF on-chip supply capacitor.

As stated at page 1 of the Incorporated Provisional Patent Application, the first sentence in "Statement of the Problem", when the RF field is shut off, the tag storage capacitor loses its energy in less than 100 microseconds. The state information on the tag is then lost.

Section II of section 7 of the Official Action of 02/01/2000 shows a lack of understanding of the states READY, ID, and DATA\_EXCHANGE. These states are explained in incorporated U. S. Patent 5,550,547 (incorporated by reference in the Abandoned Application No. 09/227,649 at page 5, the fourth patent of the list of U. S. Patents).

As explained at col. 5 of USP 5,550,547, lines 13-15, a value in state register 434, FIG. 4, indicates the state the tag is in – Ready (510, FIG. 5), Identify (530, FIG. 5) and Data\_Exchange (560, FIG. 5).

The reason for desiring not to lose state information when the tag storage capacitor Cpower loses its energy, is explained as follows in the Incorporated Provisional Patent Application at page 1 under "Statement of the Problem":

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"Statement of the problem

"For the RF tags as presently envisioned, when the RF field to power the tag is shut off, the tag storage capacitor loses its energy in less than 100 microseconds. The state information on the tag is then lost. This is particularly injurious when a base station sending polarized RF is interrogating an array of tags with polarized antennas. Some tags may not be powered up by the particular polarization used, and the communication protocol talks to each tag in turn. The tag state is changed so that it does not then interfere with communication with other tags for the rest of the communication session. If the polarization sent out from the base station is changed, some of the tags will lose power and change state. When the polarization is changed back to the original polarization, these tags will then power up in the "ready" state where they can then interfere with communications with other tags."

(Underlining Added)

With an understanding e.g. that when a tag has been identified, it is placed in the DATA\_EXCHANGE state, and that a tag in the DATA\_EXCHANGE state "stops transmitting its identification information" (incorporated USP 5,550,547, col. 6, lines 59-62), it is then readily understood why a tag losing its DATA\_EXCHANGE state, and powering up in the "ready" state can "interfere with communications with other tags" (statement of the problem quoted above, the underlined last sentence).

Referring again to part II at page 4 of the Official Action of 02/01/2000, it will be understood that the charge on the storage capacitor Cpower, Fig. 2 of the drawings of the Abandoned Application No. 09/227,649 provides the power for the register (e.g. 434, FIG. 4 of incorporated USP 5,550,547) which stores a value to indicate what state the tag is in (USP 5,550,547, col. 5, lines 13-15). Thus when the storage capacitor Cpower loses its energy, the value in the register indicating the state of the tag will be lost.

The Official Action of 02/01/2000 states in Part I of Section 7 at page 3 that it is unclear what relationship exists between the main digital section and the

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additional components of Figure 4. However as shown in Figures 1-3, and described at page 1 of the Incorporated Provisional Application, the bottom four lines, Caux provides power to run mirror latches which hold copies of the state information. The mirror latches are read back into the main state machine on the falling edge of the power-no-good signal when the chip restarts.

Thus the Official Action of 02/01/2000 demonstrates a lack of awareness of the teachings of incorporated USP 5,550,547 and of the incorporated 1997 Literature Reference, but given knowledge of this prior art, the Official Action of 02/01/2000 totally fails to justify a rejection under 35 USC 112, first paragraph.

As stated in MPEP 2164.01 at page 2100-193, (the lower middle of the first column), "A patent need not teach and preferably omits, what is well known in the art."

Respectfully,

  
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